

## REMARKS

Claims 1-22 are pending in this application. By this Amendment claims 6 and 15 are amended and claims 21 and 22 are added.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

With respect to the prior art rejections, claims 1-20 stand rejected upon informalities (e.g., 35 U.S.C. §112, second paragraph).

The rejection is respectfully traversed in the following discussion.

### I. THE 35 U.S.C. §112 REJECTION

#### The 112, second paragraph, rejection

In rejecting claims 1-20, the Examiner alleges that the rejected claims are “indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” Specifically, it is alleged that the composition ratio of In is not clear.

As is clear from a reading of the specification, the composition ratio is the ratio of atoms to the whole number of atoms constructing the semiconductor, as set forth at page 4, lines 7-13 of the Specification which recites  $Al_{1-x-y}Ga_yIn_xN$ . Thus, when the composition ratio  $1-x-y$  of Al and the composition ratio of  $y$  of Ga and the composition ratio  $x$  of In are added, the total is 1. In other words, the composition ratio  $x$  of In is the ratio of the number of atoms of In to the whole number of atoms ( $Al + Ga + In$ ).

In the composition ratio  $a$ , “ $a$ ” is a function of the  $z$ -coordinate which relates to the thickness of the active layer. The composition ratio  $a$  varies to  $z$ , as may be seen in Fig. 2 where the vertical axis of Fig. 2 is equivalent to composition ratio  $a$ , and the horizontal axis of Fig. 2 is equivalent to  $z$ .

With respect to claim 5 and its dependent claims, the Examiner questions the meaning of the term “ $da/dz$ .” Applicants assume that the Examiner uses the character “ $d$ ” to refer to the recited Greek letter “ $\delta$ ”, as recited in claim 5 as “wherein gradient  $\delta a/\delta z$  is arranged to be

0.01nm<sup>-1</sup> or less at each place.”

The gradient  $\delta a/\delta z$  is a differential coefficient of the function of the In composition ratio  $a$  with respect to  $z$ . In other words, the gradient  $\delta a/\delta z$  is the slope of the curve at any point  $z$  in the function as shown in Fig. 2, for example. Thus, claim 5 defines the maximum slope of the curve to be not greater than 0.01/nm.

With respect to claim 6, the claim is amended in a manner believed to be fully responsive to the rejection.

Accordingly, withdrawal of the rejection of claims 1-20 is respectfully requested.

Applicants respectfully request acknowledgment of receipt of the claim for Priority and receipt of a certified copy of the priority document (JP 2003-297682) from the International Bureau.

In view of the foregoing, Applicants submits that claims 1-22, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

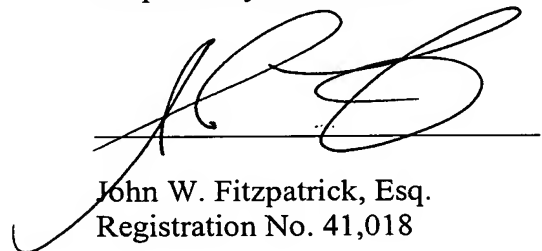
Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

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Respectfully Submitted,



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